

CLAIMS

What is claimed is:

- 1 1. A method, comprising:
 - 2 directing a client's request for an information object to an information object repository
 - 3 without regard as to whether the information object is actually stored at the information object
 - 4 repository; and
 - 5 determining, according to information included in a uniform resource locator (URL)
 - 6 whether the client is authorized to receive the information object.
- 1 2. The method of claim 1 wherein the information object repository is selected according to
- 2 specified performance metrics.
- 1 3. The method of claim 2 wherein the specified performance metrics comprise one or more of:
- 2 average delay from the information object repository to the client, average processing delays at the
- 3 information object repository, reliability of a path from the information object repository to the
- 4 client, available bandwidth in said path, and loads on the information object repository.
- 1 4. The method of claims 2 further comprising instructing the information object repository to
- 2 obtain a copy of the information object.
- 1 5. The method of claim 2 wherein the information included in the URL comprises information
- 2 identifying the requesting client.
- 1 6. The method of claim 5 wherein the information included in the URL further comprises
- 2 information identifying an owner of the information object.

1 7. The method of claim 2 wherein the information included in the URL comprises one or more
2 digital signatures.

1 8. The method of claim 7 wherein the one or more digital signatures identify one or more of: the
2 requesting client, and an owner of the information object.

3 9. The method of claim 2 wherein the information included in the URL is compared with an
4 access list at the information object repository to determine whether the client is authorized to
5 receive the information object.

1 10. The method of claim 2 further comprising denying access to the information object if the
2 client is not authorized to receive the information object, otherwise, returning the information
3 object to the client.

1 11. The method of claim 2 wherein the information included in the URL comprises multiple
2 digital signatures and each digital signature is compared with an access list at the information
3 object repository to determine whether the client is authorized to receive the information object.

1 12. A method, comprising:
2 assigning a set of access control labels to each of a number of users of a caching
3 infrastructure in a network, the labels to be used in specifying access control lists for content of the
4 users;
5 referring requests for the content to selected information object repositories of the caching
6 infrastructure without regard as to whether the content is actually stored at the information object
7 repositories; and
8 controlling access to the content according to access lists developed according to the
9 access control labels.

1 13. The method of claim 12 wherein the information object repositories are selected according to
2 specified performance metrics.

3 14. The method of claim 13 wherein the specified performance metrics comprise one or more of:
4 average delay from a selected one of the information object repositories to a source of a
5 corresponding one of the requests, average processing delays at the selected one of the information
6 object repositories, reliability of a path from the selected one of the information object repository,
7 available bandwidth in said path, and loads on the selected one of the information object
8 repositories.

1 15. The method of claim 12 wherein access is controlled by comparing information included in
2 uniform resource locators (URLs) to the access control lists.

1 16. The method of claim 15 wherein the information included in the URLs comprises one or more
2 digital signatures.

1 17. The method of claim 16 wherein the one or more digital signatures identify one or more of:
2 the source of the requests, and an owner of an information object being requested.

1 18. The method of claim 12 further comprising maintaining the access control lists corresponding
2 to the access control labels.

3 19. The method of claim 12 wherein the access control labels are hierarchical in nature.

1 20. The method of claim 12 wherein each of the information object repositories of the caching
2 infrastructure stores a copy of each of the access control lists.

1 21. The method of claim 12 further comprising denying access to content if a request therefor is
2 not authorized, otherwise, returning the content to a requestor thereof.